

## CLAIMS:

1.(currently amended) A pathogen reduction device for water comprising:

a) a ~~confined heating zone~~ direct contact water heater for heating pathogen laden water;

b) ~~a means for transporting the water to said confined heating zone so as to facilitate heating of the water~~ controlling pathogen laden water flow into said direct contact water heater;

c) ~~a means for preventing the heated water from leaving the device until pathogens entrained in the heated water are killed~~ containing water heated by said direct contact water heater; and

d) ~~a means for preventing pathogens entrained in unheated water from leaving the device.~~ controlling the removal of heated water from said water containing means; and

e) means for reducing pathogens in an exhaust gas discharged from said direct contact water heater to atmosphere.

2.(currently amended) The device as recited in claim 1 wherein ~~the means for preventing pathogens from leaving the device further comprises an antimicrobial substrate~~ said water containing means includes a storage tank.

3.(currently amended) The device as recited in claim 1 wherein ~~the means for preventing heated water from leaving the device~~ said heated water removal controlling means includes a plurality of valves actuated by programmable logic controllers.

4.(currently amended) The device as recited in claim 1 wherein ~~the heating zone is subjected to~~ said direct contact water heater includes exhaust gas from a gas-fired combustion.

5.(currently amended) The device as recited in claim 4 wherein said direct contact water heater includes ~~further comprising~~ a zone for ~~imparting low pressure to the~~ reducing exhaust gas pressure.

6.(currently amended) The device as recited in claim [6] 1 wherein ~~the one for imparting low pressure to the exhaust gas is intermediate the~~ said direct contact water heater includes an antimicrobial substrate and the heating zone.

7.(original) The device as recited in claim 1 wherein said direct contact water heater includes means for heating pathogen laden water to a temperature ~~the water is heated to~~ below its boiling point.

8.(currently amended) The device as recited in claim 1 wherein ~~the confined heating zone contains a means for heating the fluid and the step of subjecting the fluid to the controlled atmosphere further comprises injecting the fluid into the controlled atmosphere at a fluid~~ said pathogen laden water flow controlling means includes defined by the following equation algorithm:

BTU/hr of the heater / (Y x delta T)  
wherein

delta T = (Required kill temperature - Coldest possible inlet fluid temperature) and where Y is derived from the following formula:

(Specific heat of the fluid to be heated X Weight of the fluid to be heated X minutes in one hour).

9.(currently amended) A method for reclaiming fluid contaminated with pathogens, the method comprising:

a) providing a ~~heated, controlled atmosphere~~ direct contact fluid heater for heating a pathogen laden fluid;

b) subjecting the pathogen laden fluid to ~~the controlled atmosphere~~ heat for a time ~~and at a temperature~~ sufficient to kill pathogens entrained in a liquid phase of the pathogen laden fluid;

c) subjecting an aerosolized phase of the pathogen laden fluid to an antimicrobial

substrate; and

d) releasing the subjected liquid phase and the subjected aerosolized phase to the ambient environment.

5 10.(currently amended) The method as recited in claim 9 wherein the ~~controlled atmosphere~~ direct contact fluid heater has a positive pressure flow leading to the ambient environment.

11.(original) The method as recited in claim 9 wherein the fluid is water.

12.(original) The method as recited in claim 9 wherein the temperature is below the condensation point of the fluid.

10 13.(currently amended) The method as recited in claim 9 wherein the ~~controlled atmosphere~~ contains direct contact fluid heater includes a means for heating the fluid and the step of ~~subjecting the fluid to the controlled atmosphere further comprises injecting the fluid into the controlled atmosphere~~ direct contact fluid heater at a fluid flow defined by the following equation algorithm:

15 BTU/hr of the heater / (Y x delta T)

wherein

delta T = (Required Kill Temperature - Coldest possible inlet fluid temperature)

and where Y is derived from the following formula:

20 (Specific heat of the fluid to be heated X Weight of the fluid to be heated X minutes in one hour).

14.(new) The device as recited in claim 1 wherein said atmosphere exhaust pathogens reducing means includes a spray curtain disposed above a main water feed nozzle.

15.(new) The method as recited in claim 9 wherein the step of providing a direct contact water heater includes the step of providing exhaust gas for engaging the pathogen laden fluid.

25 16.(new) The method as recited in claim 9 wherein the step of subjecting an aerosolized phase